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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,286	09/10/2004	Kazuto Kokuryo	NSG-238US	2854
23122	7590	03/20/2006	EXAMINER	
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			GLASS, ERICK DAVID	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Period for Reply

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 6, and 8-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson (US 4,463,294) in view of Armstrong (US 4,554,493).

With respect to claim 1, Gibson discloses collecting water by a wiper operation (fig. 1, 12) and; detecting an impact (column 1, lines 50-51) of raindrop on the detection area; judging (column 2, lines 60-66) whether or not the amount of water passing through the detection area is not smaller than a predetermined threshold value; judging whether or not the impact (column 1, lines 50-51) of the raindrop on the detection area is detected if the amount of water passing (column 2, lines 60-66) through the detection area is not smaller than the predetermined threshold value; and carrying out control (column 2, lines 66-68) to decrease frequency of wiping operation of the wiper if the impact of the raindrop on the detection area is not detected.

Gibson does not teach detecting an amount of the collected water passing through the detection area. Gibson does state the sensor could be mounted anywhere it faces oncoming rain, which could include the windshield under the wiper coverage area.

Armstrong teaches collecting water by a wiper operation (abstract), detecting (column 3, lines 5-26) an amount of the collected water passing through the detection area (column 8, lines 22-33). It would have been obvious to one having ordinary skill in the art at the time of the invention to put the sensing area subject to the action of the windshield wipers into the device of Gibson, to provide the advantage of being cleaned of water (column 3, lined 11-12) so the sensor could update the system in response to water present, as taught by Armstrong.

With respect to claim 2, Gibson discloses wherein when a judgment result that the amount of water passing (column 2, lines 60-66) through the detection area is not smaller than the predetermined threshold value and the impact of the raindrop on the detection area is not detected continues a plurality of times, control is carried out to decrease the frequency of wiping operation of the wiper (column 3, lines 16-18).

With respect to claim 3, Gibson discloses wherein when the wiper operates at a high wiping speed (fig. 3, 34), the control (column 2, lines 66-68) to decrease the frequency of wiping operation of the wiper is control to switch over the wiping speed to a lower speed (fig. 3, 30).

With respect to claim 5, Gibson discloses wherein when the wiper operates in an intermittent mode, the control to decrease the frequency of wiping operation of the wiper is control to switch over the period of wiping operation to a longer period (column 1, lines 30-37).

With respect to claim 6, Gibson discloses wherein when the wiper operates in an intermittent mode, the control to decrease the frequency of wiping operation of the wiper is control to switch over the state to a waiting state (column 1, lines 30-37).

With respect to claim 8, Gibson discloses a means (column 1, lines 56-68 and column 2, lines 1-5) for receiving as inputs a detection result of the amount of water passing through the detection area (fig. 2, 16), with the water being carried by wiping operation of the wiper (fig. 1, 12), and a detection result detection area; an impact of a raindrop (column 1, lines 50-51) on the means for judging whether or not the amount of water passing (column 2, lines 60-66) through the detection area is smaller than a predetermined threshold value; means for judging whether or not the impact of the raindrop (column 1, lines 50-51) on the detection area detected the amount of water passing (column 2, lines 60-66) through the detection area is not smaller than the predetermined threshold value; and means for carrying out control (column 2, lines 66-68) to decrease frequency of wiping operation of the wiper the impact of the raindrop on the detection area is not detected.

With respect to claim 9, Gibson discloses means for carrying frequency of wiping operation of the wiper, when a judgment result that the amount of water passing (column 2, lines 60-66) through the detection area is not smaller than the predetermined out control to decrease the threshold value and the impact of the raindrop on the detection area is not detected continues a plurality of times (column 3, lines 16-18).

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Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson (US 4,463,294) in view of Armstrong (4,554,493) and in further view of Ausiello (US 6,184,642).

With respect to claim 4, Gibson and Armstrong does not teach wherein when the wiper operates in a continuous mode, the control to decrease the frequency of wiping operation of the wiper is control to switch over the mode to an intermittent mode.

With respect to claim 4, Ausiello teaches wherein when the wiper operates in a continuous mode, the control to decrease the frequency of wiping operation of the wiper is control to switch over the mode to an intermittent mode (column 5, lines 13-19).

It would have been obvious to one having ordinary skill in the art at the time of the invention to implement the control design of switching from a continuous mode to an intermittent mode into the control of Gibson, to provide the advantage of automatically controlling the wiper in dependence on the presence of liquid and/or the quantity of liquid present on a window of a vehicle (column 1, lines 17-19) as taught by Ausiello.

Allowable Subject Matter

Claims 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 7 is allowed. With respect to claim 7, the Prior Art does not teach wherein when the wiper operates predetermined threshold value period of wiping operation of an intermittent mode, the is changed according to the wiper. With respect to claim 10, the Prior Art does not teach include steps of

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collecting water from a first and a second portions of the windshield glass; the first and second portions being different in area; and determining the difference between the water collected in the first portion and the water collected in the second portion and judging whether the difference is not smaller than the predetermined threshold value.

Response to Arguments

Applicant's arguments filed January 5, 2006 have been fully considered but they are not persuasive. It is commonly known in the art that water is collected through wiper operations. Gibson states that his sensor can be mounted on any place on the vehicle (column 4, lines 57-60) and Gibson wipers collect water like all windshield wipers. So the rejection to claim 1 is upheld. Ausiello does what is stated by claim 4.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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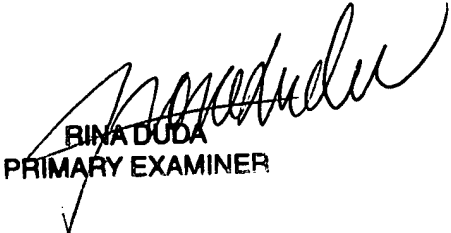
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is 571-272-8395. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on 571-272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EG


RINA DUDA
PRIMARY EXAMINER